



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/769,295

01/26/2001

Shingo Suzuki

108467

4830

25944

7590

11/13/2002

OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER

SAWHNEY, HARGOBIND S

ART UNIT

PAPER NUMBER

2875

9

DATE MAILED: 11/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/769,295

Applicant(s)

SUZUKI ET AL.

Examiner

Hargobind S Sawhney

Art Unit

2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. The amendment filed on September 9, 2002 has been entered. Accordingly, Claim 1 has been amended, and a new Claim 8 has been added.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 8 is rejected under 35 U.S.C. 102(b) as being anticipated by Abe et al. (U.S. Patent No. 5,857,761).

Abe et al. (U.S. Patent No. 5,857,761) discloses a spread illuminating apparatus (Figure 1) comprising:

- a bar-like light source including elements 1-3 (Figure 1, column 5, lines 29 and 30) positioned in the vicinity of an end surface 5 of a transparent substrate 4 (Figure 1, column 5, lines 31 and 54);
- the substrate 4 made of a light transmitting material (Figure 1, column 5, line 31);

- the bar-like light source including elements 1-3 further comprising a light conductive member 3 made of a light transmitting material (Figure 1, column 5, lines 28 and 30), formed bar-like, and positioned closed to and along the end face 5 of the transparent substrate 4 (Figure 1);
- a spot-like light source 1 (Figure 1, column 5, line 27) facing the end of the light conductive member 3 (Figure 1);
- the light guiding member 2 guiding the light (Figure 1, column 5, lines 28 and 29) emitted by the spot-like light source 1, and being positioned between the end 3a of the light conductive member 3 and the spot-like light source 1 (Figure 1); and
- the light guiding member 2 being formed integrally with the light conductive member 3 (Figure 1).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abe et al. (U.S. Patent No. 5,857,761) in view of Kusakabe (U.S. Patent No. 6,431,716 B1).

Regarding Claim 1, Abe et al. (U.S. Patent No. 5,857,761) discloses a spread illuminating apparatus (Figure 1) comprising:

- a transparent substrate 2 usable as a light source of a liquid crystal display (column 1, lines 10-13);
- a bar-like light source including elements 1-3 (Figure 1, column 5, lines 29 and 30) composed of a light conductive member 2,3 (Figure 1, column 5, line 28) made of a transparent material (Figure 1, column 5, lines 32-35), and positioned close to and along at least one end face 5 of the transparent substrate 4 (Figure 1, column 5, lines 52-57);
- the substrate 4 made of a light transmitting material (Figure 1, column 5, line 31);
- the spot-like light source 1 (Figure 1, column 5, line 27) inherently positioned on a electric wiring board (not shown); and
- the light guiding member 2 guiding the light (Figure 1, column 5, lines 28 and 29) and being positioned between the end 3a of the light conductive member 3 and the spot-like light source 1 (Figure 1).

Although, Abe teaches a use of a transparent substrate as a flat light source for a LCD— interpreted as any type- of liquid crystal display (LCD)- he specifically does not teach the LCD being a reflective-type LCD requiring positioning of the transparent substrate over its screen.

On the other hand, Kusakabe (U.S. Patent No. 6,431,716 B1) teaches a transparent substrate 2 (Figure 15, column 2, lines 64-67 and column 3, lines 1 and 2)

made of a light transmissible material, and positioned over a screen of a reflection type liquid crystal display (LCD) L (Figure 15, column 2, lines 62-67; and column 3, lines 1 and 2).

It would be have been obvious to one of ordinary skill in the art at the time of the invention to make use of the spread illuminating system of Abe by positioning the transparent substrate below the upper surface of the reflection-type LCD as taught by Kusakabe for the benefit and advantage of brightening the screen in a spread manner and independent of its distance from the light source.

Regarding Claim 2, Abe further teaches the light guiding member 2 being formed integrally with the light conductive member 3 (Figure 1).

Regarding claims 3 and 4, Abe et al. (U.S. Patent No. 5,857,761) further teaches the light guiding member 2 (Figure 1, column 5, line 32) being an optical fiber. However, neither combined nor independent teaching of Abe and Kusakabe discloses a spread illuminating apparatus comprising a light guiding member separately formed from a light conductive member.

It would have been an obvious matter of design choice to modify the spread illumination apparatus comprising a light guiding member separately formed from a light conductive member instead of it being an integral with the light conductive member. Since the applicant has not disclosed that a separately formed light guiding member solves any problem or is for a particular reason. It appears that the claimed invention would perform equally well with a light guiding member separately formed from a light conductive member.

Regarding claims 5-7, dependent on claims 1,2 and 3 respectively, Abe et al. (U.S. Patent No. 5,857,761) does not disclose a spread illumination apparatus comprising a light guiding member including a means for increasing reflection. On the other hand, Kusakabe (U.S. Patent No. 6,431,716 B1) discloses a spread illuminating apparatus (Figures 1 and 3) comprising a light conductive member 13 (Figure 1, column 6, lines 58 and 59) including means 19 and 20 (Figure 3) increasing reflection (Figures 1 and 3, column 7, lines 20-35).

It would be have been obvious to one of ordinary skill in the art at the time of invention to modify the spread illumination apparatus of Abe by providing a light conductive member with reflection increasing means as taught by Kusakabe for the benefits and advantages of providing an illumination apparatus with improved light emitting efficient.

Response to Amendment

6. Applicant's arguments filed on September 9, 2002 have been fully considered but they are not persuasive.

Applicant's argument with respect to the 35 U.S.C. § 102(b) rejections of claims 1 and 2 and 35 U.S.C. § 103(a) rejections of claims 3-7 have been considered but are moot in view of the new ground(s) of rejections.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kawaguchi et al. (US Patent No. 6,283,602 B1) discloses an assembly of a lighting device with a liquid crystal display comprising some of the features including a point light source, a bar-like light conductive unit, a transparent substrate and a LCD.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hargobind S Sawhney whose telephone number is 703-306-5909. The examiner can normally be reached on 7:30 - 5:15.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on 703-305-4939. The fax phone numbers

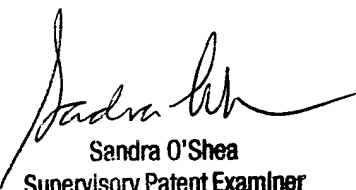
Art Unit: 2875

- for the organization where this application or proceeding is assigned are 703-308-7724 for regular communications and 703-308-8303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2956.

HSS

11/4/2002



Sandra O'Shea
Supervisory Patent Examiner
Technology Center 2800